

REMARKS

This Amendment is responsive to the Office Action mailed on February 12, 2004. Claims 1-3, 5-7, 9-10, 12 and 14-24 are pending in the application. Claims 1-24 stand rejected. Claims 1, 6, 21 and 23 have been amended to more particularly claim the subject matter of the present invention. Claims 4, 8, 11, 13, 25 and 26 have been canceled without prejudice. No new matter has been entered as a result of the amendments.

Objection to Specification

The Office Action includes an assertion that the application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). Applicants respectfully submit that an abstract was included in the original filing of the patent application. A return postcard and the Transmittal Letter verify that the abstract was filed with the application.

The abstract is being submitted again in the present Amendment, with amendments to delete the reference numerals that were required in the counterpart PCT application.

Additionally, Applicants have noticed that the Examination omitted consideration of claims 25 and 26 as originally filed. This was brought to the Examiner's attention in a telephone interview held after Applicant's receipt of the present Office Action.

Applicants respectfully assert that all of claims 1-26 were originally filed in the application. Evidence of the filing includes the return postcard, Express Mail Certificate and Transmittal Letter, (copies attached) clearly indicating that there were 48 pages filed including the abstract, a note listed under paragraph 20 indicating that the U.S. version for examination incorporates claims as amended on March 29, 2001 in reply to Written Opinion, as well as the fee calculation sheet indicating that a total of 26 claims were filed with the appropriate filing fees being paid for the additional claims.

Applicants respectfully submit the original claims filed in the case are claims 1-26. Copies of pages 47 and 48 of the application as originally filed are enclosed herewith for the Examiner's convenience, as it appears that these pages were lost or misplaced by the Patent Office.

Claim Objections

The Office Action includes the assertion that claim 8 is objected to because of the acronym "ITU-TX.731." The Office Action states that the acronym should be defined at least once in the claims to prevent misinterpretation with other acronyms from other technologies or disciplines. Claim 8 has been amended to include a definition of the acronym.

With this Amendment, it is respectfully requested that the objection be withdrawn.

35 USC Section 102 Rejections

Claims 1-3, 5-7 and 9-24 stand rejected under 35 USC Section 102(e) as being anticipated by Parthasarathy (US Patent No. 6,347,398 B1). This rejection is traversed.

An anticipation rejection requires that each and every element of the claimed invention as set forth in the claim be provided in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein.

The Parthasarathy et al. reference fails to disclose each and every element claimed by Applicants. Specifically, the Parthasarathy et al. reference fails to disclose a television set-top terminal, comprising a computer readable medium having computer program code, and means for executing said computer program code to implement an Application Programming Interface (API) wherein application data which defines applications is recovered at the terminal according to locators associated with the applications, the applications are registered and installed at the terminal, the API enables running and subsequent stopping of the applications, the API enables the retrieval of the applications as broadcast software applications, and the API enables pausing of the applications once they are running, and subsequent resuming of the

applications, as claimed in claim 1. Amended claim 1 incorporates the subject matter of now canceled claim 4 relating to the retrieval of the applications as broadcast software applications. The Examiner concedes that the Parthasarathy et al. reference does not disclose this aspect of the invention (see page 6 of the Office Action regarding claim 4). Since the Parthasarathy et al. reference fails to disclose each and every claimed element, there is no anticipation of claim 1 or those claims dependent thereon.

The Parthasarathy et al. reference also fails to disclose a television set-top terminal, comprising a computer readable medium having computer program code, and means for executing the computer program code to implement an Application Programming Interface (API) wherein: application data which defines applications is recovered at the terminal according to locators associated with the applications, the applications are registered and installed at the terminal, the API enables particular ones of the applications to advertise their respective states to other applications, and the API provides an ITU-T X.731-based mechanism for monitoring and controlling the applications, wherein said ITU-T X.731 is an international standard which defines management states, status codes and state transitions for manageable objects, as claimed in claim 6. In particular, as recognized by the Examiner, the Parthasarathy et al. reference at least does not disclose that the API provides an ITU-T X.731-based mechanism for monitoring and controlling the applications. Since the Parthasarathy et al. reference fails to disclose each and every claimed element, there is no anticipation of independent claim 6, or those claims dependent thereon.

The Parthasarathy et al. reference further fails to disclose a method for implementing a software architecture for a television set-top terminal, comprising providing a computer readable medium having computer program code, and executing said computer program code to implement an Application Programming Interface (API) to recover application data which defines applications at the terminal according to a locator associated with the application data, register and install the applications at the terminal, enable running and subsequent stopping of the applications, enable the retrieval of the applications as broadcast software applications, and enable pausing of the applications once they are running, and subsequent resuming of the

applications, as claimed in claim 21. In particular the Parthasarathy et al. reference does not disclose at least the claimed element of the API enabling the retrieval of the applications as broadcast software applications. Since the Parthasarathy et al. reference fails to disclose each and every claimed element, there is no anticipation of claim 21 or those claims dependent thereon.

The Parthasarathy et al. reference also fails to disclose a method for implementing a software architecture for a television set-top terminal, comprising, providing a computer readable medium having computer program code, and executing said computer program code to implement an Application Programming Interface (API) to, recover application data which defines applications at the terminal according to a locator associated with the application data, register and install the applications at the terminal, enable particular ones of the applications to advertise their respective states to other applications, and monitor and control the applications via a ITU-T X.731-based mechanism, wherein said ITU-T X.731 is an international standard which defines management states, status codes and state transitions for manageable objects, as claimed in claim 23. In particular, the Parthasarathy et al. reference fails to at least disclose that the API provides an ITU-T X.731-based mechanism for monitoring and controlling the applications. Since the Parthasarathy et al. reference fails to disclose each and every claimed element, there is no anticipation of claim 23 and the claim dependent thereon.

Withdrawal of the anticipation rejection under 35 USC Section 102(e) is therefore respectfully requested.

35 USC Section 103 Rejections

Claims 4 and 8 stand rejected under 35 USC Section 103(a) as allegedly being unpatentable over Parthasarathy (US Patent No. 6,347,398 B1) as applied to claims 1 and 6 in view of Frailong et al. (US Patent No. 6,230,194 B1). This rejection is traversed.

With respect to claim 4, it is the Examiner's contention that Frailong suggests the use of API to enable the retrieval of applications as broadcast software applications. The Examiner goes on to conclude that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Parthasarathy and Frailong because broadcasting applications in a distributed environment makes upgrading and installing components more efficient and timely.

With regard to claim 8, the Examiner recognizes that Parthasarathy does not expressly disclose the provisions of an ITU-T X.731-based mechanism for monitoring and controlling the applications. However, the Examiner contends that Frailong suggests such a mechanism in an analogous art. Thus the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Parthasarathy and Frailong, because using the ITU based mechanism would enable both one way and mutual authentication as well as facilitate security and reliable identification and encryption for downloaded data.

Applicants respectfully disagree with the assertions in the Office Action.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

The combination of the Parthasarathy et al. reference with the Frailong et al. reference fails to teach or suggest each and every claimed element. Parthasarathy does not expressly

disclose retrieval of the applications as broadcast software applications. Moreover, the Parthasarathy et al. reference fails to disclose that the API provides an ITU-T X.731-based mechanism for monitoring and controlling the applications. The Frailong et al. reference does not remedy the defects of the Parthasarathy et al. reference.

The Frailong et al. reference teaches a system for upgrading the software contents of a network interface device connecting a client computer system to an external network. The Frailong et al. reference teaches an upgrade process at FIG. 11. The step 1004 teaches that the notification message is a secure message which the remote management server sends only to gateway interface devices which have been predetermined to be qualified for an upgrade. The notification message includes four parameters which have been associated with the upgrade package. The first is a fetch time window which specifies the date or time range during which the upgrade package will be made available on the FTP servers. The second is an apply time window which specifies the time at which the upgrade is to be applied within the gateway interface devices. The third parameter is the address of the FTP site where the upgrade is available. The fourth is a decryption key to decrypt the software comprising the upgrade package. The Frailong et al. reference is silent with respect to the application as broadcast software applications. The Frailong et al. reference merely teaches a Secure Sockets Layer (SSL) protocol. SSL supports the upgrade, reconfiguration, and diagnostic protocols. The gateway interface device uses a public key cryptographic algorithm signed Hardware Certificate which adheres to the ITU X.509 version 3(1996) ASN.1 encoding conventions, while the remote management server uses a public key cryptographic algorithm signed Head-End Certificate. The Frailong et al. reference is silent with respect to the API providing an ITU-T X.731-based mechanism for monitoring and controlling the applications. (See Frailong Abstract, col. 15, lines 24-43, col. 18 lines 25-54 and FIG. 11).

The combination of the Parthasarathy et al. reference with the Frailong et al. reference would not result in Applicant's claimed structure or method. Specifically, the combination of the Parthasarathy et al. reference with Frailong et al. does not teach or suggest that the API enables the retrieval of the applications as broadcast software applications. The Parthasarathy et al.

reference lacks the teaching of applications as broadcast software applications and the Frailong et al. reference merely teaches at step 1004, that the notification message is a secure message which the remote management server sends only to gateway interface devices which have been predetermined to be qualified for an upgrade. The notification message includes four parameters which have been associated with the upgrade package. Combining the references would not cure the defects of the primary Parthasarathy et al. reference. Thus, the combination of the Parthasarathy et al. reference with Frailong et al. cannot possibly render Applicant's claims obvious. Additionally, the combination of the Parthasarathy et al. reference with the Frailong et al. reference does not teach or suggest that the API provides an ITU-T X.731-based mechanism for monitoring and controlling the applications. The Parthasarathy et al. reference lacks the teaching of an API providing an ITU-T X.731-based mechanism for monitoring and controlling the applications. The Frailong et al. reference merely teaches a public key cryptographic algorithm signed Hardware Certificate which adheres to the ITU X.509 version 3(1996) ASN.1 encoding conventions. Thus, the combination of the Parthasarathy et al. reference with the Frailong et al. reference would not render the present claims obvious.

Since the proposed combination of the Parthasarathy et al. reference with the Frailong et al. reference fails to teach or suggest all of the elements as set forth in Applicant's claims, there is no *prima facie* case of obviousness.

In view of the above, Applicants respectfully submit that the present invention is not anticipated by and would not have been obvious to one skilled in the art in view of the Parthasarathy et al. reference, taken alone or in combination with any of the other prior art of record.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Withdrawal of the rejections under 35 U.S.C. § 103(a) is therefore respectfully requested.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,



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Attorney Docket No.: GIC-555
Date: April 27, 2004



25. The terminal of claim 11, wherein:
a user is notified of the presence of the
applications after registration and installation
thereof.

26. The terminal of claim 13, wherein:
a user is notified of the presence of the
applications after registration and installation
thereof.

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